

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 and 2 (cancelled)

3. (Currently Amended) A method for identifying a swine that is resistant to intestinal colonization by *E. coli* that are capable of binding to the *E. coli* F18 receptor (ECF18R) ~~ECF18R~~ in swine, said method comprising:

- (a) determining whether a genetic polymorphism, wherein a nitrogen base at position 307 in the open reading frame of the alpha (1, 2) fucosyltransferase 1 gene (FUT1) (SEQ ID NO: 12) of the swine is adenine, or a polymorphism in linkage disequilibrium with the FUT1 polymorphism that has only adenine at position 307, is in the swine; and
- (b) inferring that the swine is resistant if the swine only has adenine at position 307 or is homozygous for a polymorphism in linkage disequilibrium with FUT1 adenine in position 307.

4. (Currently amended) A method for identifying a swine that is resistant to intestinal disorders caused by a microorganism capable of binding to the *E. coli* F18 receptor (ECF18R) ~~ECF18R~~ in swine, said method comprising:

- (a) determining whether the only nitrogen base at position 307 in the open reading frame of the alpha (1, 2) fucosyltransferase 1 gene (SEQ ID NO: 12) of the swine is adenine; and
- (b) identifying the swine as resistant if the only nitrogen base at position 307 of the open reading frame of FUT1 is adenine.

5. (Currently amended) A method for breeding swine that are resistant to diseases caused by *E. coli* capable of binding to the *E. coli* F18 receptor (ECF18R) ~~ECF18R~~ in swine, said method comprising:

- (a) selecting for breeding swine that are homozygous for a genetic polymorphism in the open reading frame of the alpha (1, 2) fucosyltransferase 1 gene, wherein a nitrogen base at position 307 in the open reading frame of the alpha (1, 2) fucosyltransferase 1 gene

- (SEQ ID NO: 12) of the swine is adenine, or for a polymorphism in linkage disequilibrium with the FUT1 polymorphism that has adenine at position 307; and
- (b) breeding the selected swine.
6. (Previously presented) The method of claim 5 wherein the *E. coli* is strain F18.